Participatory Identification of Factors Inhibiting Integrated Management of Livestock and Wildlife Production on Kenyan Rangelands

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C5-Non-Livestock Amenities of Grassland/Rangeland Resources

Key words : livestock , wildlife , disease , predation

Introduction While the Kenyan ASAL (spell out this acronym) has numerous natural resources that support 65% of wildlife and account for 80% of the country's ecotourism interests , some 65% of the ASAL population live below the poverty line and benefit very little from these resources (MoLFD , 2004) . In addition , land degradation is escalating and per capita livestock production , the main source of livelihood is on the decline . Wildlife (fauna) and livestock are generally complementary vegetal resource users . As such , they can be raised alongside each other with potential for complementary income generation , . This potential notwithstanding , in Kenya wildlife populations have declined by 58% since 1984 (Mungai , 2004) . The objective of this study was to establish constraints that inhibit deliberate integration of wildlife and livestock production with particular emphasis on implications of livestock losses from predation and wildlife related diseases .

Materials and methods In 2001 ,focused Participatory Rapid Appraisal (PRA) surveys were carried out in three areas of Kajiado District selected based on their tourism potential with Mbirikani group ranch , considered to have high , Mailua group ranch medium and Emarti group ranch low respectively . In November 2001 , Participatory Learning and Action Research PLAR) method was used to select 106 household from five clusters as follows ; Kalesirua in Mbirikani group ranch ; 21 households , 20 households in each of Kimana , Namelok and Impiron clusters in Kimana group ranch and 25 households in Emarti cluster in Emarti group ranch . A data sheet based on the Livestock Efficiency Calculator (LPEC) model livestock classes was used and data collected upto December 2002 was analyzed for mortality , predation and parturition rates using the LPEC model calculations (PAN Livestock Service , 1991) .

Results Wildlife was considered as a menace by communities which did not obtain economic returns from wildlife like Emarti and Mailua . On the other hand wildlife was seen as an asset by communities which had established wildlife utilization projects and were receiving financial benefits like Mbirikani . . Disease transmission from wildlife to livestock was ranked as the most important source of conflict while predation ranked third after competition for forage . It was established that most communities lacked information and technical know-how on existing and potential forms of wildlife utilization .

Diseases were the most important cause of mortality across the different species (Table 2) . Emarti reported the highest cattle herd mortality due to disease . Tick borne diseases were the most important cause of cattle mortality in all clusters except in Emarti where Malignant Catarrh Fever (MCF) was prevalent .The latter was the case as pastoralist were hand spraying livestock for tick control , a method which they noted was ineffective . Anthrax (Olodua in Maasai) and tick borne diseases were the major cause of shoats mortality in Emerti while in Kimana , Namelok , Impiron and Kalesirua it was diarrhea and Contageous Caprine Pleuropneumonia (CCPP) . Emarti reported higher predation rates from hyenas than all other clusters . Kimana and Emarti reported higher livestock predation during the wet season from November to March probably because in Emarti livestock are moved away in March to August to avoid wildebeests from Nairobi National Park . In all clusters , lion was the main predator for cattle while leopard and hyena was the major predator for shoats .

Table 1 *Source of conflict between livestock & Wildlife and rank in importance by community .*

Source of conflict	Community		
	Emarti	Mailua	Mbirikani
	Rank	Rank	Rank
Disease	1	1	1
Competition for forage	2	2	2
Predation	3	3	3
Competition for water	4	6	-
Depredation	5	4	4

Table 2 *Percent mortality from disease and predation .*

Species	Disease	Predation
Sheep	12 .1±7 .9	6±6 .9
Goats	17±13 .2	6±6 .4
Cattle	13 .4±14	1 .9±2 .6

Conclusions Derivation of benefits from wildlife is crucial to sustainable community wildlife conservation . Livestock mortality would be greatly reduced by addressing the common treatable and preventable diseases , which were the most important cause mortality .

Reference

Mungai , N . 2004 Eating our wildlife to extinction ?. Thriving bush meat trade threatens to deplete Kenya's tourism resource . Daily Nation , May 24th 2004 , Nation Media Group , Nairobi , Kenya .